PINNACLE INTERNATIONAL	**User's Manual and Operating Instructions**	Propane Cabinet Heaters

PROTEMP®

Model: PT-18-PCH-A

DESIGN CERTIFIED® CERTIFIED®

Table of Contents

Safety Information....2-3
Propane Supply / Information....3
Checking For Leaks....3
Product Features....3-4
Unpacking and Assembly....4
Ventilation....4
Connecting Heater to LP Cylinder....4
Lighting, Test Firing and Shutdown Instructions....5
Maintenance and Storage....6
TroubleShooting....6
Replacement Parts List....7
Exploded Parts Drawing....7
Warranty....Back Cover

⚠GENERAL HAZARD WARNING

FAILURE TO COMPLY WITH THE PRECAUTIONS AND INSTRUCTIONS PROVIDED WITH THIS HEATER, CAN RESULT IN DEATH, SERIOUS BODILY INJURY AND PROPERTY LOSS, OR DAMAGE FROM THE HAZARDS OF FIRE, EXPLOSION, BURN. ASPHYXIATION, CARBON MONOXIDE POISONING AND / OR ELECTRIC SHOCK.

ONLY PERSONS WHO CAN UNDERSTAND AND FOLLOW THE INSTRUCTIONS SHOULD USE OR SERVICE THIS HEATER.

IF YOU NEED ASSISTANCE OR HEATER INFORMATION SUCH AS AN INSTRUCTION MANUAL, LABELS, ETCETERA, CONTACT THE MANUFACTURER.

IMPORTANT: Read and understand all of the directions in this manual before assembling, starting or servicing the heater. Improper use of this heater can cause serious injury. Keep this manual for future reference.

⚠WARNING **Carbon Monoxide Hazard** This heater produces carbon monoxide, which has no odor. Burning the heater in an enclosed space can kill you. Never use the heater in enclosed spaces such as a tent, a camper, any vehicle or recreational vehicle (RV), enclosed shelter, or any other enclosed areas.

⚠DANGER **Not for use in residential living areas or in non-adequately ventilated enclosed spaces. Never bring or store a propane cylinder indoors.**

CONSUMER: Retain this manual for future reference.

Pinnacle Products International, Inc. 668 Stony Hill Road #302 Yardley, PA 19067 USA
Phone: 215-891-8460 Fax: 215-891-8461 Web: www.pinnacleint.com Email: info@pinnacleint.com

500250322-14

NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE

PROTEMP®

Propane Cabinet Heaters

⚠WARNING FIRE, BURN, INHALATION, AND EXPLOSION HAZARD. KEEP SOLID COMBUSTIBLES, SUCH AS BUILDING MATERIALS, PAPER OR CARDBOARD, A SAFE DISTANCE AWAY FROM THE HEATER AS RECOMMENDED BY THESE INSTRUCTIONS. NEVER USE THE HEATER IN SPACES WHICH DO OR MAY CONTAIN VOLATILE OR AIRBORNE COMBUSTIBLES, OR PRODUCTS SUCH AS GASOLINE, SOLVENTS, PAINT THINNERS, DUST PARTICLES OR UNKNOWN CHEMICALS.

⚠WARNING NOT FOR HOME OR RECREATIONAL USE.

⚠WARNING If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS:**
  - **Do not attempt to light heater**
  - **Extinguish any open flame**
  - **Shut off gas to heater**
  - **If odor continues, contact your local gas supplier or fire department.**
  - **Do not touch any electric switch, do not use any phone in your building**
  - **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions**
  - **If you can not reach your gas supplier, call the fire department**
  - **Service must be done by a qualified service agency or the gas supplier**

⚠WARNING Do not operate this heater until you have read, and thoroughly understand these safety and operating instructions.
Only persons who can read and understand these instructions should use or service this heater.
Do not direct heater discharge towards another LP cylinder unless it is at least 20 feet from the heater.

California Residents: Combustion by-products produced when using this product contain carbon monoxide, a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm).

Safety Information

This heater is designed and approved for use as a construction heater in accordance with ANSI Z83.7-2011/CSA 2.14-2011. Other standards determine the use of fuel gases and heat producing products for specific uses. Check with your local fire safety authority if you have questions about applications. This infrared heater's intended use is primarily for the temporary heating of buildings under construction, alteration or repair.

Infrared-fired means that all of the combustion products enter the heated space. This heater is rated at 98% combustion efficiency, but still produces small amounts of carbon monoxide. Carbon monoxide is toxic. Humans can tolerate small amounts of carbon monoxide, and caution should be taken to provide adequate ventilation. Failure to provide adequate ventilation in accordance with this manual could result in death. Early signs of carbon monoxide poisoning resemble the flu.

- The symptoms of inadequate ventilation are:

∗ headache ∗ dizziness ∗ burning of the nose and eyes ∗ nausea ∗ dry mouth ∗ sore throat

- If the heater is being used in the presence of others, be sure to inform them of the proper safety precautions, operating procedures and the hazards involved. Some people are more affected by carbon monoxide than others. These are pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol or at high attitudes.
- Use 20 lb. LP cylinders only.
- Check the heater thoroughly for damage before each use. DO NOT operate a damaged heater.
- DO NOT modify this heater or operate a heater that has been modified from it's original state. Modifying this heater will void your warranty.
- Keep children and animals away from heater.
- Always set heater on a stable, level surface and use the caster locks to prevent movement of the heater.
- NEVER use heater in occupied dwellings **without proper ventilation**.
- Operate in a manner that heater will not be exposed directly to rain or dripping water.
- Keep heater area free from combustible materials such as gasoline, paint thinners and other flammable vapors and liquids. Dust is combustible. Do not use heater in areas of high dust concentration.
- ALWAYS maintain proper distance from combustibles.

Minimum clearance from Combustibles:

TOP	SIDES	FRONT
24"	12"	72"

⚠CAUTION This is an unvented portable heater. It uses air (oxygen) from the area which it is used. Ample combustion and ventilation air must be provided. See VENTILATION page 4.

WARNING! This heater is not intended for residential use.

Safety Information (continued)

- NEVER leave heater unattended.
- Use heater in accordance with all local codes and with CSA 5.90 U.S. (5th Ed.) Infrared Patio Heater.
- In the absence of local codes, refer to the Standard for the Storage and Handling of Liquefied Petroleum Gases, ANSI/NFPA 58 and the Natural Gas and Propane Installation Code, CSA B149.1.
- This heater is not for use on finished floors.

Propane Supply / Information

You must provide the propane gas and cylinder(s). Use this heater only with a propane vapor withdrawal supply system. Refer to Chapter 5 of the Standard for Storage and Handling of Liquefied Petroleum Gas , ANSI/NFPA 58. Your local library or fire department will have this booklet.

- The cylinder must be equipped with a collar to protect the gas valve, an arrangement of vapor withdrawal, a shutoff valve terminating the cylinder valve outlet as specified in the American National Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections, and a safety relief valve in direct contact with the vapor space of the tank.
- Always keep the cylinder in an upright position. Avoid knocking the cylinder over on its side with the hose/ regulator connected, as this can cause damage to the regulator diaphragm.
- Never store a propane(LP) cylinder indoors or in the vicinity of any gas burning appliances.
- Protect the cylinder valve, and handle it with care.
- Be sure that the shut-off valve is closed tightly after each use.
- Be sure to protect the POL fitting from damage when disconnected. Damage to this fitting can lead to leaks.
- Never connect an unregulated cylinder to the heater. Always use the hose and regulator supplied.
- Never use any other hose and regulator.
- Do not subject the cylinder to excessive heat.

LP Characteristics:

- Flammable, explosive under pressure, heavier than air and pools in low areas.
- In its natural state, propane has no odor, but for safety an odorant that smells like rotten cabbage is added.
- Contact of LP gas with the skin can cause freeze burns.
- Heater is manufactured for use with LP gas only. DO NOT attempt to convert to any other gas. Such modifications are dangerous and will void your warranty.
- When heater is not in use, LP supply must be shut OFF.

The amount of LP gas used by this heater varies. The two factors that will determine this are as follows:

1. The amount of gas in the LP cylinder,
2. The temperature of the LP cylinder and surrounding area.

Product Features

Piezo Ignition: Model PT-18-PCH-A uses a manual Piezo igniter button to send a spark when you turn the Gas Valve Knob to “PILOT”. The spark ignites the fuel at the pilot.

Tip Switch Shut-Off System: The heater is protected by a system whereby the heater shuts off if it is substantially tilted in any direction.

ODS (Oxygen Depletion Sensor): This heater uses an Oxygen Depletion Sensor (ODS) to monitor the oxygen content in the heated space. Should the oxygen level fall below 18%, the flame will no longer touch the thermocouple, stopping electrical current and the heater will shut off.

Adjustable Input Ratings: The heater has 3 temperature ratings (high “•••”, medium”••” and low”•”). The Valve Knob is located conveniently at the top of the heater, for easy access and control.

Checking for Leaks

To check for leaks, make up a 50/50 solution of dish soap and water. Apply this solution to all gas connections. If bubbles appear, there is a leak. If a leak is found, turn off the gas supply, re-make the leaking connection. If the leak persists after several tries, contact Pinnacle Customer Service at 215-891-8460.

The installation of this heater must meet all local codes and/or gas utility requirements. In the absence of local codes, the National Fuel Code ANSI Z223.1 should be followed.

The minimum clearances to any combustible construction materials must be maintained at all times (see Page 2).

WARNING! This heater is not intended for residential use.

Features

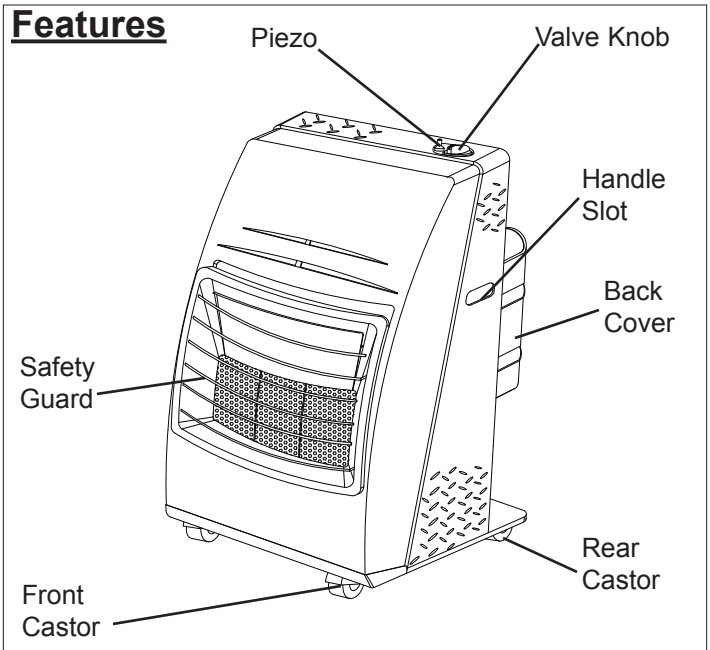


Figure 1. Product Features

Unpacking and Assembly

- Remove heater and base from Carton (Save carton and packing materials for later storage).
- Remove all protective packaging protecting heater during shipping.
- Place Heater Base on flat surface with wheels on ground.
- Line up holes in bottom of heater cabinet with locking tabs on top of base (see Figure 2).
- Mount heater cabinet to heater base sliding tabs through holes in bottom of cabinet and sliding cabinet backward approximately ¼" or until cabinet will not move further back.
- Use thumbscrews to attached heater cabinet to heater base.
- Inspect heater closely for any damage that may have occurred during shipping. If there is any damage, return the heater to the place of purchase.

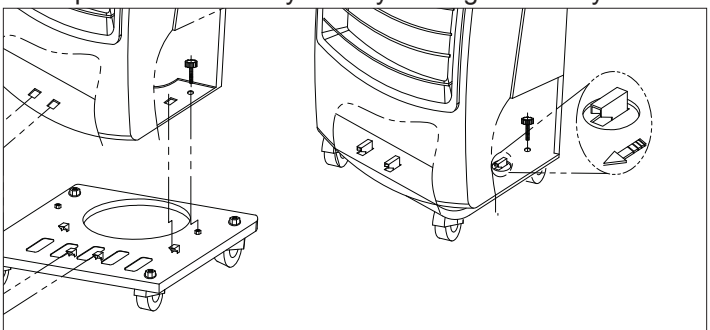


Figure 2. Attaching Heater to Base

Ventilation

Caution: Always provide a fresh air opening in the heated space of at least three square feet (2,800 sq. cm) for each 100,000 BTU/Hr. of heater output. Provide a larger opening if more heaters are being used.

FOR OUTDOOR USE. INDOOR USE PERMITTED ONLY FOR: The temporary heating of adequately ventilated buildings or structures under construction, alteration or repair!

Connecting to Gas Supply

⚠**CAUTION** ***The Propane (LP) gas pressure regulator and hose assembly supplied with the heater must be used without alteration.***

⚠**CAUTION** ***Be sure to inspect the regulator hose before each use. If the hose is cut or frayed, replace it with the manufacturer suggested assembly.***

IMPORTANT! Always use a propane (LP) cylinder that has a connection device that is compatible with the hose and regulator assembly supplied.

- Remove the Back Cover by sliding the cover straight up and away from the Heater Body. Place the LP cylinder on the Bottom Plate and replace the Back Cover.
- To connect LP cylinder, insert regulator end fitting into cylinder valve, rotate coupling nut clockwise and tighten firmly (see Figure 3).
- Open valve on propane cylinder slowly. If the valve is not opened slowly, the excess flow check valve in the regulator will stop the flow of gas. If this should happen, close the valve, wait one minute (or until you hear the valve click), and re-open, slowly.

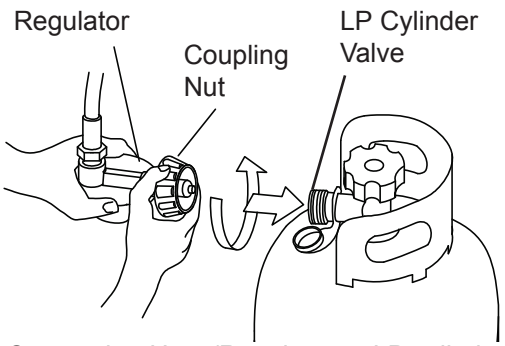


Figure 3. Connecting Hose/Regulator to LP cylinder

WARNING! This heater is not intended for residential use.

Connecting to Gas Supply (Continued)

- Be sure to inspect all connections for leaks, by using a 50/50 mixture of dish soap and water on all connection. Any bubbles forming indicate a leak.

Lighting Instructions

1. Turn the knob on the LP cylinder valve counterclockwise to the ON position.
2. Turn the Valve Knob on heater to the OFF position.
3. Wait five (5) minutes for any gas to clear. Smell for gas. If none is evident, proceed to the next step.
4. Push in the valve knob and turn to “PILOT”.

NOTE: If this is first time use for heater or LP cylinder has been replaced, hold the valve knob for approximately 30 seconds to allow bleeding of air from system then turn valve knob to PILOT.

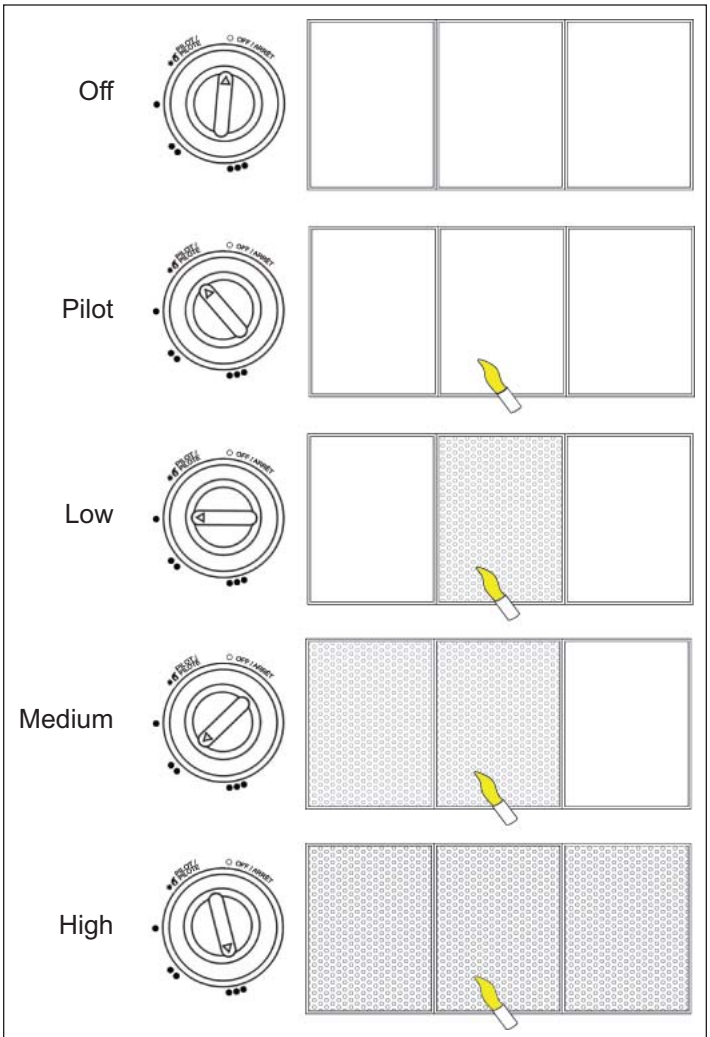


Figure 4. Gas Valve Knob Position / Burner Pattern

5. While depressing the valve knob, press red piezo ignition button to ignite. It may be necessary to press the ignitor button several times to ignite the center burner panel.
6. Continue to hold valve knob down for 30 seconds after the panel has lit. This will heat the thermocouple. After 30 seconds, release the valve knob.
7. If heater fails to light, or does not stay lit, repeat Steps 2 through 6.
8. When the center burner panel stays lit, turn valve knob to desired setting.

Test Firing Heater

It is always a good idea to test fire your heater in a safe and controlled environment, in an area with adequate ventilation, and away from any combustibles to be sure that all functions of the heater and gas supply system are operating properly.
Leak test all gas connections with a 50/50 solution of dish soap and water. DO NOT use a flame to test for leaks!

Shutdown Instructions

1. Turn the Valve Knob to the “OFF” position.
2. Turn the knob at the LP cylinder clockwise to the OFF position.
3. Disconnect Regulator Hose assembly from the LP cylinder.

Moving and Positioning the Heater

There is a brake in each of the front wheels of your heater that helps keep it in place when in use. To engage the brakes, push the lever down on each wheel.To move the heater, release the brakes, simply by flipping the levers on both brakes up (See Figure 5).

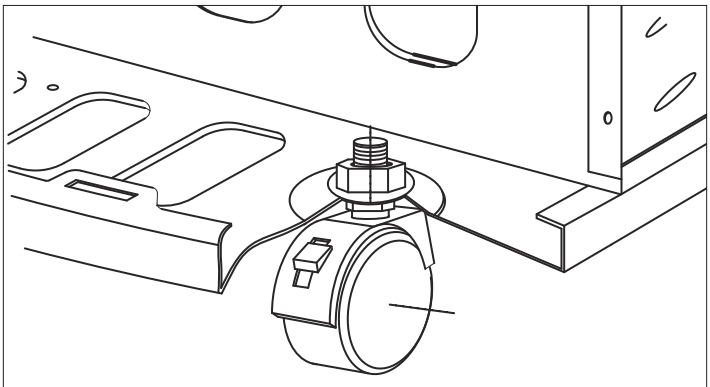


Figure 5. Casters and Brakes

Maintenance / Storage

Always disconnect the LP cylinder from the regulator assembly and remove the LP cylinder from the heater before putting the heater into storage. If for any reason the heater is to be stored indoors, the heater MUST be disconnected from the LP cylinder, and the cylinder stored outdoors in a well- ventilated area, out of the reach of children, and in accordance with the Standard for Storage and Handling of Liquefied Gases, ANSI/NFPA 58 - latest edition. The plastic valve plug or valve cover supplied with the LP cylinder must be reinstalled on the valve to protect the fitting from damage.

NOTE: Repair of this heater should be done by a qualified service person.

It is recommended that you save all of the packaging materials that came with your heater, and re-package the heater using these materials for safe storage.

Debris, dust and dirt inside of the heater body can affect the performance of your heater. This debris can impair the heaters ability to draw air for ventilation and combustion. Spiderwebs can also appear during periods of inactivity.

Be sure to inspect the heater before each use to look for any such obstructions. Be sure to keep the air passage-ways, burner and combustion areas clean. Wipe with a damp cloth or use a vacuum cleaner to clean these areas. It is suggested that you perform a thorough cleaning at least once every 30 days of operation. You may need to clean the heater more often if conditions are naturally dirty.

Clean the Ceramic Plaques using compressed air below 30 PSI to prevent damage to plaques.

A yellow tip of the pilot flame indicates that the burner area may be in need of cleaning.

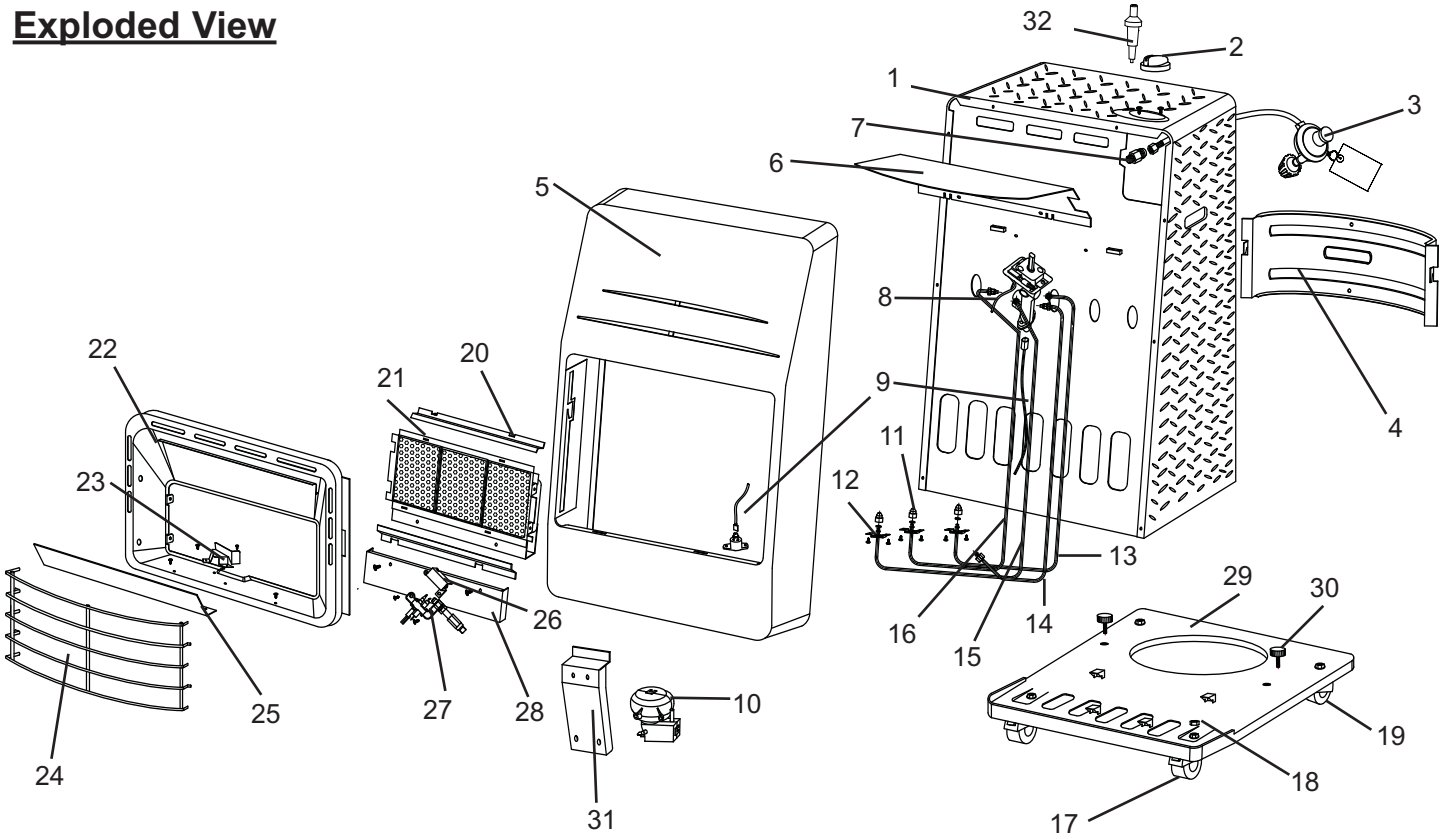
⚠WARNING ***Never store an LP cylinder inside of a building, or near any other gas or oil burning appliances.***

⚠CAUTION ***Always be sure that the heater has been allowed to cool for at least 30 minutes before attempting to store, service, or perform maintenance.***

Troubleshooting Guide

Problem	Possible Cause	Solution
Burner does not light	1. Air in gas line	1. Keep depressing the gas control knob for at least 30 seconds to remove any air in line.
	2. Gas pressure from cylinder too low	2. Check LP cylinder pressure. Tank may be empty
	3. LP cylinder valve turned off	3. Open LP cylinder valve
	4. Obstruction in air passageway	4. Inspect and clean heater housing
	5 Dirt in pilot orifice	5. Blow out, or otherwise clean the pilot orifice
	6. Safety switch in cylinder valve engaged	6. Close LP cylinder valve. Wait one minute for switch to click off. Reopen LP cylinder valve slowly
	7. Tipover switch engaged	7. Move heater to a level surface
No spark is created when ignited	1. Incorrect igniter electrode position	1. Properly position electrode
	2. Electrode damaged or broken	2. Replace the electrode
	3. Loose or disconnected igniter wire	3. Tighten or reconnect loose wire
	4. Broken igniter wire	4. Replace igniter wire
Heater stops running by itself	1. Thermocouple damaged	1. Replace thermocouple
	2. Gas control valve damaged	2. Replace gas control valve
	3. Gas leak	3. Check all connections for leaks using 50/50 solution of dishsoap and water. Repair any leaks found
	4. Thermocouple not in contact with pilot flame	4. Clean inside of heater housing
	5. Tip-over switch damaged, or loose connection at tipswitch	5.Inspect tip-over switch and connections. Replace if necessary
	6. Out of fuel	6. Replace LP cylinder

Exploded View



Replacement Parts List

Item Number	Part Description	Part Number
1	Body Frame Assembly	50-001-0515
2	Valve Knob	50-013-0210
3	Regulator Assembly	50-016-0110
4	Back Cover	50-012-0250
5	Front Panel	50-001-0165
6	Heat Plate	50-002-0205
7	Inlet Connector	50-019-0110
8	Manual Valve Assembly	50-013-0160
9	MPU Lead Wire	50-020-0210
10	Tip Over Switch	50-017-0060
11	Nozzle	50-006-0200
12	O-Ring	50-015-0110
13	Tube-R Assembly	50-010-0365
14	Tube-L Assembly	50-010-0355
15	Tube-ODS Assembly	50-010-0350
16	Tube-M Assembly	50-010-0360

Item Number	Part Description	Part Number
17	Front Castor	50-011-0110
18	Nut	50-007-0210
19	Rear Castor	50-011-0210
20	Ceramic Holder	50-026-0110
21	Burner Assembly	50-005-0105
22	Reflector	50-003-0210
23	Wind Cover - A	50-018-0110
24	Safety Guard	50-004-0300
25	Heat Shield	50-018-0310
26	Wind Cover - B	50-018-0210
27	ODS Assembly	50-008-0210
28	ODS Bracket	50-009-0210
29	Bottom Plate	50-002-0225
30	Bottom Support	50-002-0215
31	Tip Over Switch Bracket	50-017-0110
32	Piezo Button	50-014-0100

WARNING! This heater is not intended for residential use.

NEVER LEAVE HEATER UNATTENDED WHILE BURNING OR WHILE CONNECTED TO A FUEL SOURCE

PROTEMP®

Propane Cabinet Heaters

Pinnacle Products International, Inc. reserves the right to make any changes in materials, specifications, prices or design without notice. **Pinnacle Products International, Inc.** may also discontinue items at any time.

1 YEAR LIMITED WARRANTY

Pinnacle Products International, Inc. warrants this product to the original retail purchaser only, to be free from defects in material and workmanship for a period of one (1) year from the date of initial purchase. This product must be properly installed, maintained and operated in accordance with the instructions provided. **Pinnacle Products International, Inc.** requires reasonable proof of your date of purchase from an authorized retailer or distributor. Therefore, you should keep your sales slip, invoice, or cancelled check from the original purchase. This Limited Warranty shall be limited to the repair or replacement of parts, which prove defective under normal use and service within the warranty period, and which **Pinnacle Products International, Inc.** shall determine at its reasonable discretion.

This warranty does not apply to products purchased for rental use.

This Limited Warranty does not cover any failures or operating difficulties due to normal wear and tear, accident, abuse, misuse, alteration, misapplication, improper installation or improper maintenance and service by you or any third party. Failure to perform normal and routine maintenance on the heater, shipping damage, damage related to insects, birds, or animals of any kind, and damage due to weather conditions are also not covered. In addition, the Limited Warranty does not cover damage to the finish, such as scratches, dents, discoloration, rust or other weather damage, after purchase.

All transportation costs for the return of the damaged product or parts will be the responsibility of the purchaser. Upon receipt of damaged item, **Pinnacle Products International, Inc.** will examine the item and determine if defective. **Pinnacle Products International, Inc.** will repair or replace and return the item, freight pre-paid. If **Pinnacle Products International, Inc.** finds the item to be in normal operating condition, or not defective, the item will be returned freight collect.

This Limited Warranty is in lieu of all other express warranties. **Pinnacle Products International, Inc**. disclaims all warranties for products that are purchased from sellers other than authorized retailers or distributors.

AFTER THE PERIOD OF THE ONE (1) YEAR LIMITED WARRANTY EXPIRES, **Pinnacle Products International, Inc.** DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR APPLICATION. FURTHER, **Pinnacle Products International, Inc.** SHALL HAVE NO LIABILITY WHATSOEVER TO PURCHASER OR ANY THIRD PARTY FOR ANY SPECIAL, INDIRECT, PUNITIVE, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. **Pinnacle Products International, Inc.** assumes no responsibility for any defects caused by third parties. This Limited Warranty gives the purchaser specific legal rights; a purchaser may have other rights depending upon where he or she lives. Some states do not allow the exclusion or limitation of special, incidental or consequential damages, or limitations on how long a warranty lasts, so the above exclusion and limitations may not apply to you.

Pinnacle Products International, Inc. does not authorize any person or company to assume for it any other obligation or liability in connection with the sale, installation, use, removal, return, or replacement of its equipment, and no such representations are binding on **Pinnacle Products International, Inc.**

Always be sure to specify model number and serial number when making any claim with **Pinnacle Products International, Inc.** For your convenience use the space provided below to list this information:

Model #: _____

Serial #: _____

Date of Purchase: _____

ALWAYS BE SURE TO SPECIFY **MODEL NUMBER AND SERIAL NUMBER** WHEN MAKING ANY CLAIM WITH **PINNACLE PRODUCTS INTERNATIONAL, INC.** FOR YOUR CONVENIENCE USE THE SPACE PROVIDED BELOW TO LIST THIS INFORMATION:

Model #: _____ Serial #: _____

Date of Purchase: _____